

**PCT**

**NOTIFICATION OF ELECTION**

(PCT Rule 61.2)

From the INTERNATIONAL BUREAU

To:

Commissioner  
US Department of Commerce  
United States Patent and Trademark  
Office, PCT  
2011 South Clark Place Room  
CP2/5C24  
Arlington, VA 22202  
ETATS-UNIS D'AMERIQUE

in its capacity as elected Office

Date of mailing (day/month/year) 07 March 2001 (07.03.01)	
International application No. PCT/AU00/00827	Applicant's or agent's file reference
International filing date (day/month/year) 10 July 2000 (10.07.00)	Priority date (day/month/year) 15 July 1999 (15.07.99)
Applicant CANNING, John	

1. The designated Office is hereby notified of its election made:

☒ in the demand filed with the International Preliminary Examining Authority on:

14 February 2001 (14.02.01)

☐ in a notice effecting later election filed with the International Bureau on:

2. The election ☒ was

☐ was not

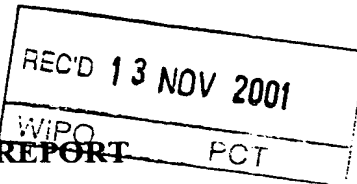
made before the expiration of 19 months from the priority date or, where Rule 32 applies, within the time limit under Rule 32.2(b).

The International Bureau of WIPO 34, chemin de la Clémence 1211 Geneva 20, Switzerland	Authorized officer C. Cupello
Facsimile No.: (41-22) 740.14.35	Telephone No.: (41-22) 338.83.38

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**PATENT COOPERATION TREATY**  
**PCT**  
**INTERNATIONAL PRELIMINARY EXAMINATION REPORT**

(PCT Article 36 and Rule 70)



Applicant's or agent's file reference AH:DGC:SL:FP12965	<b>FOR FURTHER ACTION</b>	See Notification of Transmittal of International Preliminary Examination Report (Form PCT/IPEA/416).
International Application No. <b>PCT/AU00/00827</b>	International Filing Date ( <i>day/month/year</i> ) 10 July 2000	Priority Date ( <i>day/month/year</i> ) 15 July 1999
International Patent Classification (IPC) or national classification and IPC <b>Int. Cl. <sup>7</sup> G02B 5/28, 6/34</b>		
Applicant <b>THE UNIVERSITY OF SYDNEY et al</b>		

1.	This international preliminary examination report has been prepared by this International Preliminary Examining Authority and is transmitted to the applicant according to Article 36.
2.	This REPORT consists of a total of <b>3</b> sheets, including this cover sheet. <input checked="" type="checkbox"/> This report is also accompanied by ANNEXES, i.e., sheets of the description, claims and/or drawings which have been amended and are the basis for this report and/or sheets containing rectifications made before this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions under the PCT).  These annexes consist of a total of <b>3</b> sheet(s).
3.	This report contains indications relating to the following items:  I <input checked="" type="checkbox"/> Basis of the report II <input type="checkbox"/> Priority III <input type="checkbox"/> Non-establishment of opinion with regard to novelty, inventive step and industrial applicability IV <input type="checkbox"/> Lack of unity of invention V <input checked="" type="checkbox"/> Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement VI <input type="checkbox"/> Certain documents cited VII <input type="checkbox"/> Certain defects in the international application VIII <input type="checkbox"/> Certain observations on the international application

Date of submission of the demand 14 February 2001	Date of completion of the report 26 October 2001 <b>- 9 NOV 2001</b>
Name and mailing address of the IPEA/AU AUSTRALIAN PATENT OFFICE PO BOX 200, WODEN ACT 2606, AUSTRALIA E-mail address: pct@ipaaustralia.gov.au Facsimile No. (02) 6285 3929	Authorized Officer  <b>MICHAEL HALL</b> Telephone No. (02) 6283 2474

**I. Basis of the report**1. With regard to the **elements** of the international application:\*☐ the international application as originally filed.☒ the description, pages **2-15**, as originally filed,  
pages , filed with the demand,  
pages **1, 1A**, received on **27 September 2001** with the letter of **26 September 2001**☒ the claims, pages **17**, as originally filed,  
pages , as amended (together with any statement) under Article 19,  
pages , filed with the demand,  
page **16**, received on **27 September 2001** with the letter of **26 September 2001**☒ the drawings, pages **1-12**, as originally filed,  
pages , filed with the demand,  
pages , received on with the letter of☐ the sequence listing part of the description:pages , as originally filed  
pages , filed with the demand  
pages , received on with the letter of2. With regard to the **language**, all the elements marked above were available or furnished to this Authority in the language in which the international application was filed, unless otherwise indicated under this item.

These elements were available or furnished to this Authority in the following language which is:

☐ the language of a translation furnished for the purposes of international search (under Rule 23.1(b)).☐ the language of publication of the international application (under Rule 48.3(b)).☐ the language of the translation furnished for the purposes of international preliminary examination (under Rules 55.2 and/or 55.3).3. With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application, the international preliminary examination was carried out on the basis of the sequence listing:☐ contained in the international application in written form.☐ filed together with the international application in computer readable form.☐ furnished subsequently to this Authority in written form.☐ furnished subsequently to this Authority in computer readable form.☐ The statement that the subsequently furnished written sequence listing does not go beyond the disclosure in the international application as filed has been furnished.☐ The statement that the information recorded in computer readable form is identical to the written sequence listing has been furnished4. ☐ The amendments have resulted in the cancellation of:☐ the description, pages☐ the claims, Nos.☐ the drawings, sheets/fig.5. ☐ This report has been established as if (some of) the amendments had not been made, since they have been considered to go beyond the disclosure as filed, as indicated in the Supplemental Box (Rule 70.2(c)).\*\*

\* Replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report since they do not contain amendments (Rules 70.16 and 70.17).

\*\* Any replacement sheet containing such amendments must be referred to under item 1 and annexed to this report

**V. Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement****1. Statement**

Novelty (N)	Claims 1-14	YES
	Claims	NO
Inventive step (IS)	Claims 1-14	YES
	Claims	NO
Industrial applicability (IA)	Claims 1-14	YES
	Claims	NO

**2. Citations and explanations (Rule 70.7)**Citations

D1 : US 5164956

D2 : GB 2209408

D3 : WO 86/01286

NOVELTY (N) AND INVENTIVE STEP (IS)

D1 teaches a multiperiod grating for surface emitting lasers, including a waveguide having superimposed first and second order gratings (eg, column 7 lines 18-29, 51-68, Figure 3C of D1). D2 teaches an optical waveguide grating filter, where the waveguide has two superimposed second order gratings of dissimilar periods which give rise to a further first order harmonic component (eg, Abstract, page 4, Figures 1-2 of D2). However, both the gratings of D1 and D2 are surface relief gratings, with no teaching or suggestion of gratings formed by refractive index variations as per the claims.

D3 teaches an optical fibre strain gauge, including an optical fibre waveguide having pairs of superimposed gratings of different grating spacings, which act as reflection filters (eg, page 5 line 7 to page 6 line 29 of D3). However, there is no teaching or suggestion that the gratings comprise different orders with respect to a common operating wavelength, as per the claims (see also page 1 lines 26-28 of the instant application).

The claims are therefore novel and inventive over any obvious combination of the prior art.

INDUSTRIAL APPLICABILITY (IA)

The subject matter of the claims is applicable to optical waveguide grating devices.